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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,181	12/07/2004	Johannes Wilhelmus Theodorus Eikenbroek	P15069-US1	5687

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ERICSSON INC.  
6300 LEGACY DRIVE  
M/S EVR 1-C-11  
PLANO, TX 75024

EXAMINER
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ART UNIT	PAPER NUMBER
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2621

MAIL DATE	DELIVERY MODE
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06/25/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/517,181	<b>Applicant(s)</b> EIKENBROEK, JOHANNES WILHELMUS THEODORU	
	<b>Examiner</b> Andy S. Rao	<b>Art Unit</b> 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-14, 17-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8, 12 and 13 is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-11, 14 and 17-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

*Response to Amendment*

1. Applicant's arguments filed on 3/26/07 with respect to claims 1-7, 9-11, 14, and 17-19 have been fully considered but they are not persuasive.
2. Claims 1-5, 14, and 17-18 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Eriksson et al., (US Patent 6,011,815 hereinafter referred to "Eriksson") in view of Sridharan (US 2003/005805 hereinafter referred to as "Sridharan"), as was set forth in the Office Action of 12/26/06.
3. Claims 6 and 19 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Eriksson et al., (US Patent 6,011,815 hereinafter referred to "Eriksson") in view of Sridharan (US 2003/005805 hereinafter referred to as "Sridharan"), and further in view of Liang et al., (US Patent 5,550,515 hereinafter referred to as "Liang"), as was set forth in the Office Action of 12/26/06.
4. Claim 7 remains rejected under 35 U.S.C. 103(a) as being unpatentable over Eriksson et al., (US Patent 6,011,815 hereinafter referred to "Eriksson") in view of Sridharan (US 2003/005805 hereinafter referred to as "Sridharan") in view of Liang et al., (US Patent 5,550,515 hereinafter referred to as "Liang"), and further in view of Perrett et al., (US Patent 6,018,275 hereinafter referred to as "Perrett"), as was set forth in the Office Action of 12/26/06.
5. Claims 9 and 10 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Eriksson et al., (US Patent 6,011,815 hereinafter referred to "Eriksson") in view of Sridharan (US 2003/005805 hereinafter referred to as "Sridharan"), and further in view of Okamura, as was set forth in the Office Action of 12/26/06.

6. Claim 11 remains rejected under 35 U.S.C. 103(a) as being unpatentable over Eriksson et al., (US Patent 6,011,815 hereinafter referred to "Eriksson") in view of Sridharan (US 2003/005805 hereinafter referred to as "Sridharan") in view of Okamura and further in view of Perrett et al., (US Patent 6,018,275 hereinafter referred to as "Perrett"), as was set forth in the Office Action of 12/26/06.

7. The Applicants present two substantive arguments contending Examiner Anykire's collection rejections of claims 1-7, 9-11, 14, and 17-19 as outlined above, and previously set forth in the detailed Office Action of 12/26/06. However, after a careful consideration of the arguments presented, and further scrutiny of the references, the Examiner must respectfully disagree and maintain the grounds of rejection against the pending claims for the reasons that follow.

After summarizing the pending grounds of rejection (Amendment of 12/26/06: page 9, lines 16-21), the Applicants argue that since Sridharan discloses zeros in a transfer the noise of the control signal that drives the divider in the feedback path of the PLL, but not the closed loop function transfer of the PLL (Amendment of 12/26/06: page 9, lines 22-25; page 10, lines 1-11), it fails to read upon the instant invention as claimed (Amendment of 12/26/06: page 10, lines 12-16). The Examiner respectfully disagrees. Since the divider itself directly affects the input in providing an output in the feedback path (i.e. a transfer function), the noise shaped control signal for the divider having zeroes reads on the limitation as currently recited. Also, it is unclear to the Examiner how the lack of zeros appearance in the closed loop function of the PLL as argued advances the Applicants' stance (Amendment of 12/26/06: page 10, lines 1-3), since the claims also recite having a closed loop function lack any zeros (Claim 1, lines 13-14). If anything,

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would clearly support that Sridharan's feedback transfer function reads on the claims.

Furthermore, it is noted that the limitation "a feedback circuit" only recites the necessity for a transfer function, and not what the transfer function is operative upon, so that having the transfer function for a noise shaped control signal proximal to the feedback circuit as discussed would read upon claims as currently recited. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., transfer function directly operative on inputs and outputs) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). And lastly, the Examiner notes that Sridharan discloses that the filter transfer function in a feedback circuit itself also has zeros in its transfer function which has little to do noise shaping a control signal (Sridharan: paragraph [0027], lines 1-5), but is directly operative on the input versus the output in a feedback circuit. Accordingly, the Examiner maintains that the Sridharan addresses the limitations.

Lastly, the In response to applicant's arguments against the references individually (Amendment of 12/26/06: page 10, lines 17-28; page 11, lines 1-12), one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Since the Examiner has already asserted that Sridharan reference addresses the "feedback transfer function", the tertiary references do not also need to address this limitation, but meet the feature with their combinations with the Sridharan.

*Allowable Subject Matter*

8. Claims 8 and 12-13 are allowed.

Independent claim 8 recites "...a second frequency divider connected to an first input of a second combiner device, a second input of the second combiner device is connected to the output of the phase detector, an output of the second combiner device is communicatively connected to the VCO, and wherein the second divider device comprises a phase detector section and has a transfer function with said zero..." which is a feature that is not anticipated nor obvious over the art of record. Independent claim 12 recites "...a device having a transfer function with a zero has a first input connected to said delta-sigma modulator and a second input connected to the output of the frequency divider..." which is a feature that is not anticipated nor obvious over the art for record. Independent claim 13 recites "...a device with a transfer function as specified, said device with a transfer function equal to the function as specified with a device input Connected to the output of the oscillator, said device having a transfer function with a zero further comprising: a combiner device with: a first combiner input connected to the output of the device with a transfer function as specified a second combiner input connected to the input of the device with a specified transfer function, and a combiner output connected to the input of the frequency divider device..." which are features that are not anticipated nor obvious over the art or record. Accordingly, if finally rejected claims 1-7, 9-11, 14, and 17-19 are cancelled, the application would be placed in a condition for allowance.

***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy S. Rao whose telephone number is (571)-272-7337. The examiner can normally be reached on Monday-Friday 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571)-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andy S. Rao  
Primary Examiner  
Art Unit 2621

asr  
June 18, 2007

~~RECEIVED~~  
~~PRIMARY EXAMINER~~

